YASH GUPTE

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Top Skills: Embedded C, Python, BLE, Altium, Mentor graphics, LPKF || **Domains:** Firmware, PCB Designing, Product Development

EDUCATION

MS in ECE Engineering, University of Colorado, Boulder **August 2018 - Present**

Courses: 1. Principles of Embedded Software (PES)
2. Introduction to Power Electronics

BE in Electronics, D.J. Sanghvi College Of Engineering, Mumbai, India **July 2013-August 2017**

CGPA : 8.24/10

PROFESSIONAL EXPERIENCE

BETiC (IIT Bombay), Mumbai **August 2017-July 2018**

Project Research Assistant

Biomedical engineering and technology incubation Centre (BETiC) in IIT Bombay is a **ISO 13485** certified lab facilitating rapid translation of innovative ideas from doctors into high-quality low-cost medical devices suitable for the local population. My roles involved:

- Developing and writing code, PCB Designing, PCB milling, Soldering and Testing of circuits.
- **Mentoring** Medical Device competitions organized by BETiC.

RESEARCH PROJECTS

Diabetic Foot Screening Device [*Patent Pending*] **Sept 2017- Jan2018**

Developed a Diabetic Foot Stiffness Device for sensing numbness in foot due to diabetic foot neuropathy, utilizing a **TI-MSP 432**(**Cortex M4**) for handling multiple Interrupts from controller, actuator and user button interface. **Python GUI** was used to log data in an excel sheet.

Radial Pulse Screening Device **Feb 2018-June 2018**

Developed a device to screen and record the waveforms of the radial pulse using microphones and filters which provide a screening of ailments in the human body. **ATMega328P** was used for prototyping stage due to lower cost and enough sampling rate of 10khz**. Python** was used to plot the waveforms of the recorded pulses.

ACADEMIC PROJECTS

Bluetooth Low Energy (BLE) entry registration system **June 2016-April 2017**

Developed a BLE based device which uses BLE in phones of students to mark and record attendance in lectures. **Raspberry Pi** recorded the data and provided it on a server via **FTP** for access from anywhere in local server. Implemented the above using Cypress Semiconductor **PSoC 4200 BLE board** (**Cortex M0**).

Hammer Board **Sept 2018- Present**

Developing a device to perform Load Testing on generic SMPS. Utilizing Mentor Graphics for PCB design.

Embedded Command Line Interface **Sept 2018-Present**

Interactive command-line interface with FRDMKL25Z. Involves dynamic memory operations such as allocate, store, invert and free memory.

TECHNICAL SKILLS

- Embedded C
- Python
- Altium Designer
- Mentor Graphics
- LPKF

CERTIFICATIONS AND COURSES

- **ARM University Program Training Course** on Embedded System Design and Programming.
- **Cypress University Alliance Training Program** on Internet of Things (**IoT**).
- Embedded Systems and Internet of Things (IoT).
- Fundamentals of Audio and Music Engineering: Part 1: Musical and Sound Electronics from University Of Rochester via Coursera.

AWARDS

- Stood **1st** in the **Medical Devices Hackathon** (**MEDHA 2017**) - A national level medical device innovation competition.
- Secured **2nd** position in **Line Follower Competition** (Abhiyantriki 2015) at inter college level